

REMARKS

Applicants' Specification has been amended by adding description from Langner et al. which defines a variable axis immersion lens. Langner et al. was incorporated by reference in its entirety into applicants' disclosure at the time of filing. The portion of Langner et al. description which was incorporated is found in the Langner et al. patent (U.S. 4,544,846) at Col. 1, lines 31 - 38.

Claims 1 - 16 and 25 - 29, which were withdrawn under a Restriction Requirement, have been cancelled without prejudice to place the application in better condition for allowance or for appeal.

Claim 17 has been amended to incorporate more of the elements of a variable axis immersion lens so that this device is more clearly distinguishable from an immersion lens of the kind described in the Da Lin et al. reference, which does not have a variable axis. The support for amendments to Claim 17 is found in applicants' application as originally filed at Page 2, lines 14 - 18, further supported by the description which has been incorporated from the Langner et al. reference which defines a variable axis immersion lens. Additional support is found in applicants' Specification as originally filed in Figures 2 and 3A, 3C, and 3D, as described at Pages 4, lines 23 - 30, continuing at Page 5, lines 1 - 2; and at Page 5, lines 10 - 26. Additional support is also found in the Summary of Invention as originally filed, at Page 3, lines 7 - 15.

Claim 19 has been amended so that the claim language is consistent with amended Claim 17.

Claim 21 has been amended to clarify the meaning of the magnetic field shield, and support for this amendment is found in applicants' Specification in the Summary of Invention as originally filed at Page 3, lines 7 - 12; and is further supported in Figure 3C and by the accompanying description at Page 5, lines 10 - 14, and at Page 5, lines 27 - 30, continuing at Page 6, lines 1 - 6.

Claim 22 has been amended so that the claim language is consistent with amended Claim 17.

Claim 23 has been amended so that the claim language is consistent with amended Claim 17.

Claim Rejections Under 35 USC § 102

Claims 17 - 24 are rejected under 35 USC § 102(b) as being anticipated by U.S. Patent No. 5,079,428, to Da Lin et al.

Applicants respectfully submit that applicants' Claims 17 - 24 are not anticipated by the Da Lin et al. reference, and that further, there is not even a suggestion of applicants' invention in the Da Lin et al. reference, since this reference does not pertain to a variable axis immersion lens. A variable axis immersion lens requires that the electron optical axis of the charged particle beam is shifted so as to be coincident with a downstream deflected electron beam emanating from the immersion lens at all times. The Da Lin et al. reference does not provide for the shifting of the electron optical axis of the charged particle beam.

In particular, the Da Lin et al. reference describes an electron microscope with an asymmetrical immersion lense. (Title) The electron microscope makes use of a fixed electron optical axis of the charged particle beam. This is shown in Figures 1 and 5 and is described in detail at Col. 7, lines 1 - 26. The Da Lin et al. disclosure does not even suggest the shifting of the optical axis of the charged particle beam so as to be coincident with a downstream deflected electron beam at all times. This variable axis immersion lens is the subject of U.S. Patent No. 4,376,249 to Pfeiffer et al., which is referenced in Langner et al, and is the subject of the Langner et al. One reading these patents and comparing them with the Da Lin et al. disclosure can clearly see that the Da Lin et al. disclosure does not pertain to a variable axis immersion lense.

Applicants' current attorney had attempted to respond to the Examiner's previous office actions by making minimal changes in the claims as originally presented (by another attorney),

presuming that the Examiner would see and acknowledge the general difference between the subject matter of applicants and that of the Da Lin et al. reference. In order to present the present RCE application, applicants' current attorney made an element by element analysis of the differences between a variable axis immersion lens and the subject matter presented in the Da Lin et al. patent. In addition, the elements presented in applicants' pending claims were reviewed. It then became readily apparent that applicants' independent claim, Claim 17, needed to be amended to add more of the elements of a variable axis immersion lense, so that the immersion lense of the Da Lin et al. would be clearly distinguished.

With respect to a variable axis immersion lens assembly, as described by applicants, because of the close proximity to the target of at least a portion of the deflection coil used to vary the optical axis of the charged particle beam, and to the magnetic field deflection coil, it is necessary to provide a magnetic field shield which limits the radiation traveling into the electrically conductive system components downstream of the shield. Applicants devised a magnetically floating field shield which limits such radiation, while avoiding affecting the magnetic field necessary to shift of the optical axis of the charged particle beam. (Specification, Page 3, lines 1 - 17.) There is no teaching or even suggestion of such a magnetic field shield in the Da Lin et al. reference because the Da Lin et al. apparatus is a fixed axis immersion lense which does not require the kind of magnetic field shield described and claimed by applicants.

In light of the above distinctions, applicants respectfully request withdrawal of the rejection of Claims 17 - 24 under 35 USC § 102(b), over Da Lin et al.

Applicants contend that the claims as amended are in condition for allowance, and the Examiner is respectfully requested to enter the present amendments and to pass the application to allowance.

The Examiner is invited to contact applicants' attorney with any questions or suggestions, at the telephone number provided below.

Respectfully submitted,



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